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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,706	10/28/2003	Chi Fai Ho	110 Cont3	5206

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Peter Tong
1807 Limetree Lane
Mountain View, CA 94040

EXAMINER

UTAMA, ROBERT J

ART UNIT	PAPER NUMBER
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3714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/694,706	Applicant(s) HO ET AL.	
	Examiner Robert J. Utama	Art Unit 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-47 and 49-70 is/are pending in the application.
 4a) Of the above claim(s) 52-55 and 58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-47 and 49-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>07/13/2006</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Status of Claim

1. This office action is a response to an amendment filed on 07/13/2006.

The status of the claims are as follow: claims 1-38 and 48 have been cancelled, and claims 39-47, 56-57 and 59-70 are still pending. Claims 52-55 and 58 are withdrawn.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 39-47, 49-51, 56-57 and 59-63 are rejected under 35**

U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In order for a claim to be statutory it must be useful, concrete and tangible. In this instance, the claim is deemed not concrete. In order for a claim to be concrete, the result must be repeatable or assured. At the present, claims 39-40, 44, 56, and 59 carry the limitation of "*...adjusting the study materials for the presentation to get the user's attention to improve the user's concentration in learning the subject*". While the examiner agrees with the applicant in which adjusting the presentation material can get user's attention. The examiners questions that getting a user's attention could translate to an improvement in the user's concentration.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 39-40, 43-44, 49-50, 56-57, 59- 60 and 62 are rejected under 35 U.S.C. 102(e) as being anticipated by Cook et al US 5,727,950 (hereinafter Cook '950).

Claim 39 and 40: Cook '950 teaches of instructional system that presents study material (e.g.: homework) via a computer (see Cook '950 Abstract). Cook '950 teaches of measuring various factor such as: time between user input (latency) to adjust study material presentation to a specific student (Cook '950 col. 49:25-41). In Cook '950 latency refers to time measurement generated when there is no input even of an expected input type (**Claim 40**) [See Cook '950 table 2c at the top of Col. 52]. The type of input devices used in Cook '950 consist of: keyboard, mouse and other pointing device (Cook '950 col20:27-30) [**Claim 39**] The latency information are used in combination with moving average of the previous known information and then used to make a determination of the state of the user (see Cook '950 col. 63:10-25). Once the user's state has

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been determined the system will adjust the presentation material (see Cook '950 49:36-41).

Claim 43: Cook '950 explains that the adjusting the study material is determined by a user's previous interaction (via the use of moving average, error rates and etc) [see Cook '950 col.49:25-30].

Claim 44: Cook '950 teaches of instructional system that presents study material (e.g: homework) via a computer (see Cook '950 Abstract). Cook '950 teaches of measuring various factor such as: time between user input (latency) to adjust study material presentation to a specific student (Cook '950 col. 49:25-41). The latency information are used in combination with a moving average of the previous known information and then used to make a determination of the state of a user (see Cook '950 col. 63:10-25). Once the user's state has been determined the system will adjust the presentation material (see Cook '950 49:36-41).

Claim 49: Cook '950 teaches that several performance metrics (such as: time latency) can be used to adjust the time pacing of the presentation (see Cook '930 col. 63:7-25).

Claim 50: Cook '950 fails to explicitly teach increasing the stimulation level of the study material. However, Cook '950 teaches that several performance metrics (such as: time latency) can be used to adjust the time pacing of the presentation (see Cook '950 col.49: 38-43). The examiner takes the position that increasing the time pacing of the presentation constitutes an increase in the level of stimulation.

Claim 56: Cook '950 teaches of instructional system that presents study material (e.g: homework) via a computer (see Cook '950 Abstract). The study

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material are tagged with certain notations; these notations contain information with regards to the study material, e.g.: level of difficulties (Cook '950 Col.51:45-52). Cook '950 teaches of measuring various factor such as: time between user input (latency) to adjust study material presentation to a specific student (Cook '950 col. 49:25:41). In Cook '950 latency refers to time measurement when there is no input event of an expected input type. The type of input devices used in Cook '950 consists of: keyboard, mouse and other pointing device (Cook '950 col20: 27-30). The latency information are used in combination with a moving average of the previous latency information and then used to make a determination of the state of a user (see Cook '950 Col. 63:10-25). Once the user's state has been determined the system will adjust the presentation material (see Cook '950 col. 49:36-41).

Claim 57: Cook '950 teaches that the amount of time used for the adaptation process is a function of the response time (a reference response time) of the user. The algorithm used to define a reference user can be done using an average of the past known user response time (see Cook '950 col.63:10-25).

Claim 59: Cook '950 teaches of instructional system that presents study materials (e.g: homework) via a computer (see Cook '950 Abstract). Cook '950 teaches of measuring various fact such as: time between user input (latency) to adjust study material presentation to a specific student (Cook '950 col. 49:25-41). The type of input devices used in Cook '950 consists of: keyboard, mouse and other pointing device (Cook '950 col20: 27-30). The latency information are used in combination with a moving average of the previous latency information and then used to make a determination of the state of a user (see Cook '950

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Col. 63:10-25). Once the user's state has been determined the system will adjust the presentation material (see Cook '950 col. 49:36-41).

Claim 60: Cook '950 explains that adjusting the study material is determined by a user previous interaction (the use of moving average, error rates and/or use of hints) [see Cook '950 col.49: 25-30], which are all independent of the content of the response.

Claim 62: Cook '950 teaches that several performance metrics (such as: time latency) can be used to adjust the time pacing of the presentation (Cook '950 col. 63:7-25).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 45-47, 50-51, 61 63 and 64-70 are rejected under 35 U.S.C.**

103(a) as being unpatentable over Cook et al US 5,727,950 (hereinafter Cook '950) and further in view of Collins et al US 5,437,553 (hereinafter Collins '553).

Claim 45 and 61: Cook '950 fails to provide a teaching where adjusting the study material comprises of presenting a question to the user. Collins '553 teaches of adjusting a study material by asking the user whether or not he wants to continue with the learning material. If the user answer with "yes" he will be

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shown a new learning material; on the other hand, if the user answer with “no” he will be shown a game in order to reclaim his attention span (see Collins ‘553 Col. 6:10-36 and FIG 4. item 144). Therefore, it would have been obvious at the time of the invention to modify Cook ‘950 with the teaching of presenting an option to proceed with another learning material or a game. One of ordinary skilled in the art would have been motivated to make this combination since it would allow the student to have the option to alleviate boredom if needed (see Collins ‘553 Col.6:24-32).

Claim 46 and 47: Cook ‘950 fails to provide a teaching where adjusting the study material comprises of presenting a question to the user. Collins ‘553 teaches of adjusting a study material by asking the user whether or not he/she wants to continue with the learning material. This particular question is not related to the subject of the study material and the answer to this question is not used to assess the user’s understanding of the material (see Collins ‘553 col. 5:10-36 and FIG. 4 item 144). Therefore, it would have been obvious at the time of the invention to modify Cook ‘950 with the teaching of presenting an option to proceed with another learning material or a game. One of ordinary skilled in the art would have been motivated to make this combination since it would allow the student to have the option to alleviate boredom if needed (see Collins ‘553 Col.6:24-32).

Claim 63: Cook ‘950 fails to provide a teaching on adjusting the study material by switching to different set of study material. Collins ‘553 teaches of providing the user with the options of getting a new set of study material (Col. 6:30-35). Therefore, it would have been obvious at the time of the invention to modify Cook ‘950 with the teaching of presenting a new study material in a learning

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environment. One of the ordinary skilled in the art would have been motivated to make this combination since it would help alleviate boredom during the use of a learning system (see Collins '553 Col. 6:24-32).

Claim 64: Cook '950 fails to provide a teaching on providing the user by giving the user an option on how to proceeds in the learning process. Collins '553 teaches of adjusting a study material by asking the user whether or not he wants to continue with the learning material. If the user answer with "yes" he/she will be shown a new learning material; on the other hand, if the user answer with "no" he/she will be shown a game in order to reclaim his attention span (see Collins '553 Col. 6:10-36 and FIG 4. item 144). Therefore, it would have been obvious at the time of the invention to modify Cook '950 with the teaching of presenting an option to proceed with another learning material or a game. One of ordinary skilled in the art would have been motivated to make this combination since it would allow the student to have the option to alleviate boredom if needed (see Collins '553 Col.6:24-32).

Claim 65: Cook '950 teaches of an electronic avatar, which is used to interact with the user (Cook '950 Col. 10:10-15). Cook '950 teaches that various modalities, visual (i.e.: displayed on a screen) and auditory, are used in the interaction.

Claim 66: Cook '950 teaches of encouraging the user/student should they perform well (answering a correction correctly) and its explanations of different level of encouragement can be seen in (Cook '950 Col. 58:25-35).

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8. Claims 45 and 70 are rejected under 35 U.S.C 103(a) as being unpatentable over Cook et al US 5,727,950 (hereinafter Cook '950), further in view of Lundberg et al US 5,738,527 (hereinafter Lundberg '527).

Claim 45: Cook '950 fails to provide a teaching where adjusting the study material comprises of presenting a question to the user. Lindberg '527 teaches of presenting a question to a student when he/she fails to respond to after a certain amount of time (see Lindberg '527 FIG. 2 and col. 1:25-37). Therefore, it would have been obvious at the time of the invention to modify Cook '950 with the teaching of a providing a question by Lundberg '527. One of ordinary skilled in the art would have been motivated to make the combination since it would the user to drill themselves in a particular subject (Lundberg '527 col.4:-23-25).

Claim 70: Cook '950 fails to provide a teaching where the answer of the question does not affect the study material to be presented to the user. Lindberg '527 teaches that presenting a question to a student when he/she fails to respond to after a certain amount of time (see Lindberg '527 FIG. 2 and col. 1:25-37). As shown by Lindberg '527 (FIG. 3 and 4) whether the user's response to the question is right or wrong does not affect the study materials to be presented to the user. Therefore, it would have been obvious at the time of the invention to modify Cook '950 with the teaching of a providing a question by Lundberg '527. One of ordinary skilled in the art would have been motivated to make the combination since it would the user to drill themselves in a particular subject (Lundberg '527 col.4:-23-25).

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9. Claims 69 are rejected under 35 U.S.C 103(a) as being unpatentable over Cook et al US 5,727,950 (hereinafter Cook '950), further in view of Reiber et al US 5,681,170 (hereinafter Reiber '170).

Claim 69: Cook '950 teaches of a system where the study material which have different level of difficulty. Cook '950 does not explicitly teach of using the incorrect answer to the question posed to the student as a basis of lowering the level of difficulties to help the user learn.

Reiber '170 teaches of learning device that has the ability to adjust (increase or decrease) the difficulty level of the study material on the basis of a user's past performance (Reiber '170 Col. 1:55-65). Therefore, it would have been obvious at the time of the invention to further modify Cook '950 with the teaching of adapting the difficulty level of the study material with regards to the user's performance. One of ordinary skilled in the art would have been motivated to make this combination since it would avoid frustrating or boring the user (Reiber '170 Col. 1:43-51).

10. Claims 41-42 are rejected under 35 U.S.C 103(a) as being unpatentable over Cook et al US 5,727,950 (hereinafter Cook '950), further in view of Gervins et al US 5,724,987 (hereinafter Gervins '987).

Claim 41 and 42: Cook '950 fails to provide a teaching where adjusting the study materials comprises of adjusting the audio (**claim 41**) and visual effect (**claim 42**). Gervins '987 teaches of adjusting the distribution of teaching via the auditory or visual modalities (Gervins '987 Col. 6:11-17). Therefore, it would have been obvious to further modify Cook '950 with the teaching of adapting the distribution between auditory and visual modalities of the

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presentation of the teaching material. One of ordinary skilled in the art would have been motivated to make this combination since it would maintain the user at an optimal level of attention and comprehension (Gevins '987 Col. 4:25-30).

Response to Arguments

11. Applicant's argument with respect to claims 39-47, 49-51, 56-57 and 59-70 have been considered but are moot in view of the new ground(s) of rejection.
12. The IDS submitted by the applicant is sufficient to overcome the objection mentioned in the previous office action.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the

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statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Utama whose telephone number is (571) 272-1676. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski can be reached on (571)272-6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RU
February 1st 2007

Kathleen Mosser
KATHLEEN MOSSER
PRIMARY EXAMINER